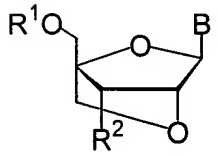
**Amendments to the Claims:**

**Claim 1. (currently amended)** A compound of formula (1) or a pharmaceutically acceptable salt thereof,



(1)

, wherein[[,]] $R^1$ ~~is the same or different~~[[,]] ~~and each represents~~ selected from the group consisting of a hydrogen atom, a protecting group for a hydroxy group in nucleic acid synthesis, a phosphoric acid group, a phosphoric acid group protected with a protecting group in nucleic acid synthesis, [[or]] and a group represented by the formula $-P(R^{4a})R^{4b}$, wherein $R^{4a}$ and $R^{4b}$ are the same or different and each represents a hydroxy group, a hydroxy group protected with a protecting group in nucleic acid synthesis, a mercapto group, a mercapto group protected with a protecting group in nucleic acid synthesis, an amino group, an amino group protected with a protecting group in nucleic acid synthesis, an alkoxy group having 1-6 carbon atoms, an alkylthio group having 1-6 carbon atoms, a cyanoalkoxy group

having 1-7 carbon atoms, or an amino group substituted by an alkyl group having 1-6 carbon atoms,

$R^2$ represents an azido group, an amino group, or a group represented by the formula -NH-$R^3$, wherein $R^3$ ~~is the same or different and each represents~~ selected from the group consisting of a protecting group for an amino group in nucleic acid synthesis, a phosphoric acid group, a phosphoric acid group protected with a protecting group in nucleic acid synthesis, or a group represented by the formula -P($R^{4a}$)$R^{4b}$, wherein $R^{4a}$ and $R^{4b}$ [[is]] are the same or different and each represents a hydroxy group, a hydroxy group protected with a protecting group in nucleic acid synthesis, a mercapto group, a mercapto group protected with a protecting group in nucleic acid synthesis, an amino group, an amino group protected with a protecting group in nucleic acid synthesis, an alkoxy group having 1-6 carbon atoms, an alkylthio group having 1-6 carbon atoms, a cyanoalkoxy group having 1-7 carbon atoms or an amino group substituted by an alkyl group having 1-6 carbon atoms,

B represents a purin-9-yl group or a 2-oxo-1,2-dihydropyrimidin-1-yl group each of which is ~~optionally~~ unsubstituted or substituted with 1 or more substituents selected from the group consisting of

a hydroxy group,

a hydroxy group protected with a protecting group in nucleic acid synthesis,

an alkoxy group having 1-6 carbon atoms,

a mercapto group,

a mercapto group protected with a protecting group in nucleic acid synthesis,

an alkylthio group having 1-6 carbon atoms,

an amino group,

an amino group protected with a protecting group in nucleic acid synthesis,

an amino group substituted by an alkyl group having 1-6 carbon atoms,

an alkyl group having 1-6 carbon atoms[[,]] and

halogen atom.

**Claim 2. (currently amended)** The compound according to claim 1, wherein $R^1$ represents a hydrogen atom, an aliphatic acyl group, an aromatic acyl group, a silyl group, a methyl group substituted by 1 to 3 aryl groups, or a methyl group substituted by 1 to 3 aryl groups wherein the aryl rings thereof are substituted by a lower-alkyl group, a lower-alkoxy group, a halogen atom or a cyano group.

**Claim 3. (currently amended)** The compound according to claim 1, wherein $R^1$ represents a hydrogen atom, a silyl group, a methyl

group substituted by 1 to 3 aryl groups, or a methyl group substituted by 1 to 3 aryl groups wherein the aryl rings thereof are substituted by a lower-alkyl group, a lower-alkoxy group, a halogen atom or a cyano group.

**Claim 4. (currently amended)** The compound according to claim 1, wherein $R^1$ represents a hydrogen atom, a trimethylsilyl group, a t-butyldimethylsilyl group, a t-butyldiphenylsilyl group, a benzyl group, a triphenylmethyl group, a 4-methoxybenzyl group, a 4-methoxyphenyldiphenylmethyl group, a 4,4'-dimethoxytriphenylmethyl group, or a 4,4',4''-trimethoxytriphenylmethyl group.

**Claim 5. (currently amended)** The compound according to claim 1, wherein $R^2$ represents an azido group, an amino group, or a group represented by the formula -NH-$R^3$, wherein $R^3$ represents an aliphatic acyl group, an aromatic acyl group, a methyl group substituted by 1 to 3 aryl groups, a methyl group substituted by 1 to 3 aryl groups wherein the aryl rings thereof are substituted by a lower-alkyl group, a lower-alkoxy group, a halogen atom, or a cyano group, a silyl group, a phosphoramidite group, a phosphonyl group, a phosphoric acid group or a phosphoric acid group protected with a protecting group in nucleic acid synthesis.

**Claim 6. (currently amended)** The compound according to claim 1, wherein $R^2$ represents an azido group, an amino group, or a group represented by the formula -NH-$R^3$, wherein $R^3$ represents an

acetyl group, a trifluoroacetyl group, a benzoyl group, a benzyl group, a p-methoxybenzyl group, a tert-butyldiphenylsilyl group, a group represented by the formula $-P(OC_2H_4CN)(NCH(CH_3)_2)$, a group represented by the formula $-P(OCH_3)(NCH(CH_3)_2)$, a phosphonyl group, [[or]] a [[2-]]~~chlorophenyl~~[[-]] 2-chlorophenylphosphonic acid group or a 4-chlorophenylphosphonic acid group.

**Claim 7. (original)** The compound according to claim 1, wherein $R^2$ represents an azido group or an amino group.

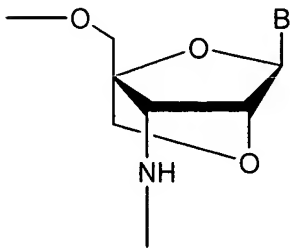
**Claim 8. (original)** The compound according to claim 1, wherein B represents 6-aminopurin-9-yl, 6-amino-purin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2,6-diaminopurin-9-yl wherein one or both amino groups are protected with a protecting group in nucleic acid synthesis, 2-amino-6-chloropurin-9-yl, 2-amino-6-chloropurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2-amino-6-fluoropurin-9-yl, 2-amino-6-fluoropurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2-amino-6-bromopurin-9-yl, 2-amino-6-bromopurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2-amino-6-hydroxypurin-9-yl, 2-amino-6-hydroxypurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 6-amino-2-methoxypurin-9-yl, 6-amino-2-methoxypurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 6-amino-2-chloropurin-9-yl, 6-amino-2-chloropurin-9-yl

wherein the amino group is protected with a protecting group in nucleic acid synthesis, 6-amino-2-fluoropurin-9-yl, 6-amino-2-fluoropurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2,6-dimethoxypurin-9-yl, 2,6-dichloropurin-9-yl, 6-mercaptopurin-9-yl, 6-mercaptopurin-9-yl wherein the mercapto group is protected with a protecting group in nucleic acid synthesis , 2-oxo-4-amino-1,2-dihydropyrimidin-1-yl, 2-oxo-4-amino-1,2-dihydropyrimidin-1-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 4-amino-2-oxo-5-fluoro-1,2-dihydropyrimidin-1-yl, 4-amino-2-oxo-5-fluoro-1,2-dihydropyrimidin-1-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 4-amino-2-oxo-5-chloro-1,2-dihydropyrimidin-1-yl, 4-amino-2-oxo-5-chloro-1,2-dihydropyrimidin-1-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2-oxo-4-methoxy-1,2-dihydropyrimidin-1-yl, 2-oxo-4-mercapto-1,2-dihydropyrimidin-1-yl, 2-oxo-4-mercapto-1,2-dihydropyrimidin-1-yl wherein the mercapto group is protected with a protecting group in nucleic acid synthesis, 2,4-dihydroxypyrimidin-1-yl, 2,4-dihydroxy-5-methylpyrimidin-1-yl, 4-amino-5-methyl-2-oxo-1,2-dihydropyrimidin-1-yl, or 4-amino-5-methyl-2-oxo-1,2-dihydropyrimidin-1-yl group wherein the amino group is protected with a protecting group in nucleic acid synthesis.

**Claim 9. (original)** The compound according to claim 1, wherein B represents 6-benzoylaminopurin-9-yl, adeninyl, 2-benzoylamino-6-hydroxypurin-9-yl, guaninyl, 2-oxo-4-benzoylamino-1,2-dihydropyrimidin-1-yl, cytosinyl, uracilyl or thyminyl.

**Claim 10. (previously presented)** The compound according to claim 1, wherein the compound is 3'-amino-3'-deoxy-2'-O,4'-C-methylene-5-methyluridine.

**Claim 11. (withdrawn - currently amended)** An oligonucleotide analogue or a pharmaceutically acceptable salt thereof having 1 or more structural units represented by the following formula (1a),




(1a)

provided that when the oligonucleotide has two or more structural units of formula (1a), each B is the same or different,
wherein B represents a purin-9-yl group or a 2-oxo-1,2-dihydropyrimidin-1-yl group which are ~~optionally~~ unsubstituted or substituted with a substitutent selected from the group consisting of:

a hydroxy group,
a hydroxy group protected with a protecting group in nucleic acid synthesis,
an alkoxy group having 1-6 carbon atoms,
a mercapto group,
a mercapto group protected with a protecting group in

nucleic acid synthesis,

an alkylthio group having 1-6 carbon atoms,

an amino group,

an amino group protected with a protecting group in nucleic acid synthesis,

an amino group substituted by an alkyl group having 1-6 carbon atoms,

an alkyl group having 1-6 carbon atoms[[,]] and

a halogen atom.

**Claim 12. (withdrawn)** The oligonucleotide analogue or a pharmaceutically acceptable salt thereof according to claim 11, wherein B represents 6-aminopurin-9-yl, 6-aminopurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2,6-diaminopurin-9-yl, 2-amino-6-chloropurin-9-yl, 2-amino-6-chloropurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2-amino-6-fluoropurin-9-yl, 2-amino-6-fluoropurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2-amino-6-bromopurin-9-yl, 2-amino-6-bromopurin-9-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 2-amino-6-hydroxypurin-9-yl, 2-amino-6-hydroxypurin-9-yl wherein the amino and hydroxyl groups are protected with a protecting group in nucleic acid synthesis, 6-amino-2-methoxypurin-9-yl, 6-amino-2-chloropurin-9-yl, 6-amino-2-fluoropurin-9-yl, 2,6-dimethoxypurin-9-yl, 2,6-dichloropurin-9-yl, 6-mercaptopurin-9-yl, 2-oxo-4-amino-1,2-dihydropyrimidin-1-yl, 2-oxo-4-amino-1,2-dihydropyrimidin-1-yl wherein the amino group is protected with a protecting group in nucleic acid

synthesis, 2-oxo-4-amino-5-fluoro-1,2-dihydropyrimidin-1-yl, 4-amino-2-oxo-5-fluoro-1,2-dihydropyrimidin-1-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis, 4-amino-2-oxo-5-chloro-1,2-dihydropyrimidin-1-yl, 2-oxo-4-methoxy-1,2-dihydropyrimidin-1-yl, 2-oxo-4-mercapto-1,2-dihydropyrimidin-1-yl, 2-oxo-4-hydroxy-1,2-dihydropyrimidin-1-yl, 2-oxo-4-hydroxy-5-methyl-1,2-dihydropyrimidin-1-yl, 4-amino-5-methyl-2-oxo-1,2-dihydropyrimidin-1-yl, 5-methylcytosinyl), or 4-amino-5-methyl-2-oxo-1,2-dihydropyrimidin-1-yl wherein the amino group is protected with a protecting group in nucleic acid synthesis.

**Claim 13. (withdrawn)** The oligonucleotide analogue or a pharmaceutically acceptable salt thereof according to claim 11, wherein B represents 6-benzoylaminopurin-9-yl, adeninyl, 2-isobutylamino-6-hydroxypurin-9-yl, guaninyl, 2-oxo-4-benzoylamino-1,2-dihydropyrimidin-1-yl, cytosinyl, 2-oxo-5-methyl-4-benzoylamino-1,2-dihydropyrimidin-1-yl, 5-methylcytosinyl, uracinyl or thyminyl.

**Claim 14. (withdrawn)** A pharmaceutical composition comprising a pharmaceutically effective amount of a pharmacologically active compound together with a carrier therefore, wherein said pharmacologically active compound is an oligonucleotide analogue comprising two or more nucleoside units, wherein at least one of said nucleoside units is a structure of the formula (1a) of claim 11, or a pharmaceutically acceptable salt of said compound.

**Claim 15. (original)** A method for the prevention or treatment in a mammal of a disease preventable or treatable by the pharmacologically useful antisense activity of an oligonucleotide analogue or a pharmacologically acceptable salt thereof in the body of said mammal, which method comprises administering to said mammal in need of such prevention or treatment a pharmaceutically effective amount of an oligonucleotide analogue comprising two or more nucleoside units, wherein at least one of said nucleoside units is a structure of the formula (1a) of claim 11.

**Claim 16. (withdrawn)** The method according to claim 15, wherein the mammal is a human.

**Claim 17. (withdrawn)** A method for the prevention or treatment in a mammal of a disease preventable or treatable by the pharmacologically useful antigene activity of an oligonucleotide analogue or a pharmacologically acceptable salt thereof in the body of said mammal, which method comprises administering to said mammal in need of such prevention or treatment a pharmaceutically effective amount of an oligonucleotide analogue comprising two or more nucleoside units, wherein at least one of said nucleoside units is a structure of the formula (1a) of claim 11.

**Claim 18 (original)** The method according to claim 17, wherein the mammal is a human.

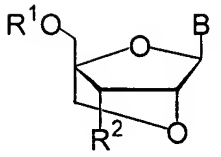
**Claim 19. (withdrawn - currently amended)** In an antisense oligonucleotide comprising two to one hundred nucleoside units, the ~~improveent~~ improvement comprising at least one of said nucleoside units having a structure of the formula (1a) of claim 11.

**Claim 20. (withdrawn)** In a probe for a gene comprising an oligonucleotide analogue, the improvement comprising the oligonucleotide analogue comprising two or more nucleoside units, wherein one of said units is a unit of the formula (1a) of claim 11.

**Claim 21. (withdrawn)** In a primer for starting amplification comprising an oligonucleotide analogue, the improvement comprising the oligonucleotide analogue comprising two or more nucleoside units, wherein one of said units is a unit of the formula (1a) of claim 11.

**Claim 22. (withdrawn - currently amended)** In an ~~antisense~~ antigene oligonucleotide comprising two to one hundred nucleoside units, the improvement comprising at least one of said units being a unit of the formula (1a) of claim 11.

**Claim 23. (currently amended)** A compound of the formula (1):




(1)

wherein $R^1$ represents a hydrogen atom or a protecting group for a hydroxy group;

$R^2$ represents an azido group or an amino group that optionally is protected; and

B represents a purin-9-yl group or a pyrimidin-1-yl group, each of which ~~optionally~~ is unsubstituted or substituted with 1 or more substituents selected from the group consisting of

a halogen atom

an alkoxy group having from 1 to 6 carbon atoms,

a hydroxyl group which may be protected,

a mercapto group which may be protected,

an amino group which may be protected,

an alkoxy group having from 1 to 6 carbon atoms,

a mono-alkylamino group, the alkyl group of which having 1 to 6 carbon atoms and a di-alkylamino group, the alkyl group of which has from 1 to 6 carbon atoms.

**Claim 24. (withdrawn)** The compound according to claim 1, wherein the compound is 3'-azido-3'-deoxy-2'-O,4'-C-methylene-5-methyluridine.

**Claim 25. (withdrawn)** The compound according to claim 1, wherein the compound is 3'-azido-5'-O-tert-butyldiphenylsilyl-3'-deoxy-2'-O,4'-C-methylene-5-methyluridine.

**Claim 26. (withdrawn)** The compound according to claim 1, wherein the compound is 3'-azido-3'-deoxy-5'-O-(4,4'-dimethoxytrityl)-2'-O,4'-C-methylene-methyluridine.

**Claim 27. (withdrawn)** The compound according to claim 1, wherein the compound is 3'-amino-3'-deoxy-5'-O-(4,4'-dimethoxytrityl)-2'-O,4'-C-methylene-5-methyluridine.

**Claim 28. (withdrawn)** The compound according to claim 1, wherein the compound is 3'-amino-3'-deoxy-N(4-monomethoxytrityl)-2'-O,4-C-methylene-5-methyluridine-5-O-(2-cyanoethyl-N,N-disopropyl)-phosphramidite.